U.S. INTRAGENERATIONAL

ECONOMIC MOBILITY FROM 1984 TO 2004:

TRENDS AND IMPLICATIONS

BY GREGORY ACS AND SETH ZIMMERMAN

ECONOMIC MOBILITY PROJECT
An Initiative of The Pew Charitable Trusts

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This report is a product of the Economic Mobility Project
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CONTENTS

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By 2004, the richest 20 percent of households earned over half the total household income in the United States, and their share of income continues to grow.[1] Meanwhile, the share of income earned by the poorest 20 percent of U.S. households stands at 3.4 percent of total household income, down 15 percent over two decades. Indeed, despite strong economic growth during the mid- to late-1980s and again during the mid- to late-1990s, income inequality by most every measure is higher today than in 1984.[2]

High and rising income inequality engenders concerns about inequality in opportunity—for example, lower-income households may not have access to the same quality education or health care as higher-income households—and unequal opportunities may exacerbate and perpetuate income inequality.

Income inequality, however, even rising inequality, is not inherently a problem. Inequality in income to some extent reflects inequality in ability and effort; as such, it is a central component of the reward and incentive structure that drives economic growth. In addition, annual measurement has shown that the people at the bottom of the income distribution in one year may be higher up the next year, and people at the top may fall to the bottom. *In no small part, economic mobility, the rate at which individuals change positions in the income distribution over time, mitigates inequality.*

The crucial question is what has happened to economic mobility. Increasingly, Americans feel that they cannot get ahead, and that it is even hard to keep up.[3] A recent public opinion poll revealed that over half of all Americans believe they have not moved forward, and nearly one-third say they have fallen back.

Further, only 41 percent say they are better off now than they were five years ago—the lowest level in nearly 50 years. Meanwhile, the share of those saying they are worse off than they were five years ago reached 31 percent, the highest it has been in almost half a century.[4]

Clearly the steady drumbeat of bad economic news—from the housing crisis to the credit crisis, from growing unemployment to the rapid rise in fuel and food prices—has weighed heavily on the real and perceived well-being of Americans. Yet the question remains: has it gotten harder for Americans to get ahead and stay ahead?

To address that question, we examine trends in U.S. intragenerational income mobility over the past two decades.[5] Specifically, we focus on how the economic positions of 25- to 44-year-olds change over a decade relative to one another, as well as in absolute terms (whether they are doing better or worse at the end of the decade than they were at the start). In addition, we compare intragenerational mobility rates over two periods, 1984 to 1994 and 1994 to 2004.

We find that mobility rates have not changed very much between these two time periods. This finding is somewhat surprising given the changes in the economy in the 1980s and 1990s, such as the ongoing shift from manufacturing to service-sector jobs, rising immigrant populations, and extended periods of growth. Further, although it is promising news that, at least through 2004, mobility rates had not fallen, stagnant mobility rates may be a cause for concern in light of rising income inequality.

Measuring Trends in Mobility: Issues and Methodology

Myriad measurement issues arise when assessing trends in mobility. These include the income measure used, such as individual earnings, pre-tax income, post-tax income; the population assessed (e.g., all individuals over age 16, 25- to 44-year-olds); and the accounting period considered, such as mobility from one year to the next, mobility over a decade, mobility based on multiple years of income, as well as the specific years considered).

By and large, the implications of different measurement choices for the level of and trend in mobility are consistent with expectations. Research that incorporates individuals at the very beginning or very end of their careers tends to show higher mobility rates than does research that focuses on prime-age workers. Research that considers mobility from a single year to another single year finds more mobility than does research that uses income averaged over several years.[6]

Economic mobility can be measured either relative to one's peer group or against an absolute standard. Relative mobility measures how an individual's economic position changes over time relative to his or her peers. This involves ranking individuals in a specific cohort (e.g., 25- to 44-year-olds) by income level (e.g., the poorest 20 percent, or bottom quintile, the next 20 percent, and so on) and then assessing how these same individuals rank relative to one another at some point in the future (say 10 years later when they are 35 to 54 years old). The more people who have changed ranks (or income quintiles) relative to their peers, the greater the level of relative income mobility.

One limitation of relative mobility is that it fails to capture the benefits of economic growth. Even if an individual failed to improve relative to his or her peers over time, that individual's absolute level of well-being may have improved. For example, when a cohort is relatively young, the poorest 20 percent of cohort members may all have incomes below $20,000 a year, but as the cohort ages and the incomes of all cohort members rise, the poorest 20 percent may have incomes up to $30,000. A woman whose income rises from $16,000 to $24,000 would be in the bottom quintile relative to her peers at both points in time (no relative mobility) even though her income grew by 50 percent in absolute terms.

Absolute mobility can capture this growth by measuring mobility using the quintile cutoffs established in a base year and assessing whether individuals' income at some later time moves them across the base-year income threshold. In the example above, the individual would have moved out of the base-year bottom income quintile because her income exceeded $20,000. Thus, absolute mobility captures the effects of economic growth, but it does not indicate whether one's position in society has changed.

We measure the pre-tax, post-transfer family income of individuals age 25 to 44 and consider how their economic positions change relative to one another as well as in absolute terms over two 10-year periods (1984–1994 and 1994–2004).[7] Relying on data from the Panel Study of Income Dynamics (PSID), we break the study population into five equally sized income groups (quintiles) and compute the share of the population that moves between quintiles over each 10-year period.[8]

Trends in Intragenerational Mobility

The results of our analysis of mobility trends are easily summarized: Intragenerational economic mobility rates have changed very little since the 1980s.

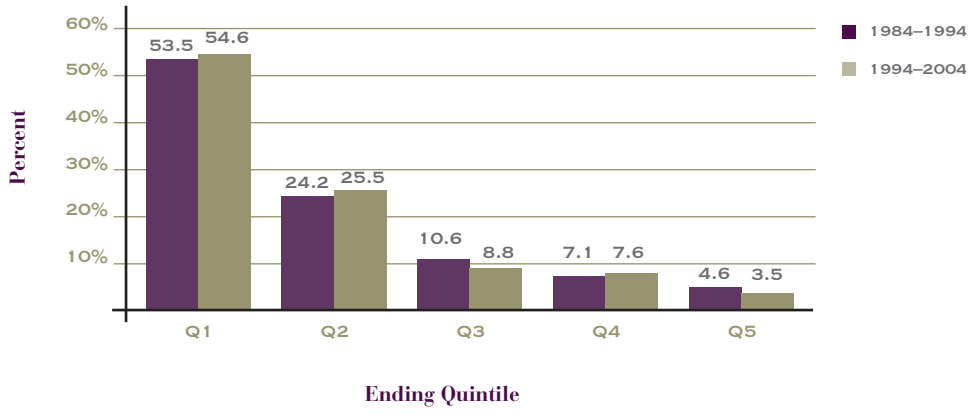
Both relative and absolute mobility rates have remained stable over the past two decades. We find that 60.4 percent of all 25- to 44-year-olds moved up or down income quintiles relative to their peers between 1984 and 1994, and 60.5 percent did so between 1994 and 2004. Absolute mobility rates have also been fairly stable over time. Between 1984 and 1994, 61.1 percent of individuals experienced income changes that moved them across their 1984 income quintile boundaries; between 1994 and 2004, absolute income mobility was 62.6 percent.

About half of individuals in the bottom income quintile move up to a higher income quintile over a ten-year period, and there has been little change in upward mobility over the past two decades. Figure 1 shows the economic position that individuals in the bottom quintile in 1984 attained by 1994 relative to their peers as well as the economic position that individuals in the bottom quintile in 1994 attained by 2004. Note that there is little difference in upward mobility rates out of the bottom quintile over the past two decades. About half of the individuals in the bottom income quintile remained there 10 years later, and about one-quarter moved up to the second quintile. About 10 percent were able to move up to the middle income quintile, 7 percent to the fourth quintile, and 4 percent reached the top quintile.

Figure 2 shows absolute upward mobility rates for those in the bottom income quintile in 1984 and 1994, respectively. A little more than half of all individuals in the bottom income quintile in 1984 experience sufficient income growth to lift

FIGURE 1

Relative Mobility Out of the Bottom Income Quintile
Ending Quintile of Persons Who Were in the Bottom Quintile 10 Years Earlier



Note: Ending quintile thresholds are based on incomes at the end of the 10-year period, starting quintile thresholds on incomes at the start of the 10-year period.

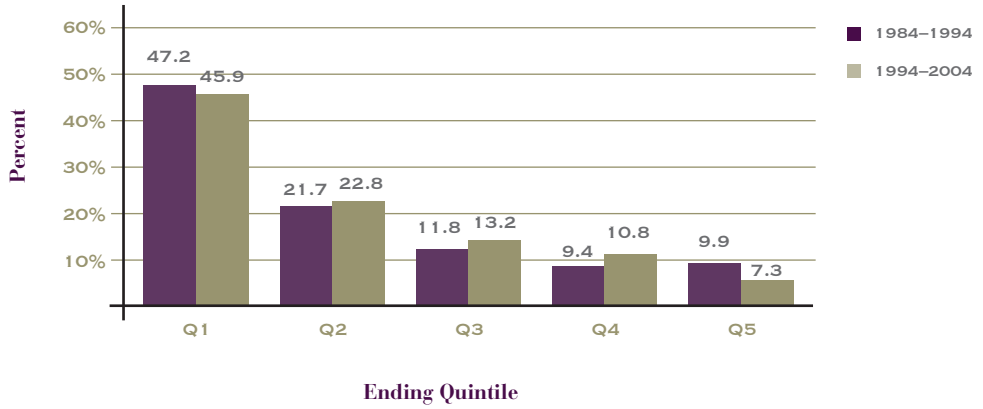
them above the 1984 bottom quintile threshold by 1994. There is no significant difference in absolute upward mobility rates between the 1984–1994 and 1994–2004 periods.

Both absolute and relative mobility measures lead to the same general conclusion: about half of those in the bottom income quintile can expect to rise out of it, and economic mobility has not changed much in the past two decades.[9]

FIGURE 2

Absolute Mobility Out of the Bottom Income Quintile

Ending Quintile of Persons Who Were in the Bottom Quintile 10 Years Earlier



Note: Starting and ending quintile thresholds are based on incomes at the start of the 10-year period, adjusted for inflation.

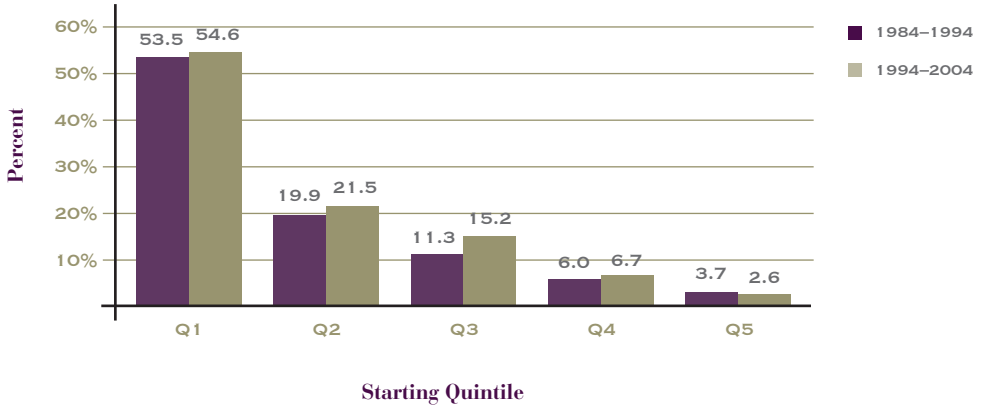
Downward mobility—the share of individuals falling into the bottom quintile—has also remained fairly stable over time. As described in Figure 3, about one in five of those who were in the second income quintile in 1984 fell into the bottom income quintile relative to their peers by 1994; downward mobility from the second quintile into the first is virtually identical from 1994 to 2004 as during the 1984 to 1994 period. Downward relative mobility rates from the middle, fourth, and top quintiles into the bottom quintile have not changed significantly over time: between 11 and 15 percent fell from the middle quintile to the bottom, 6 percent fell from the fourth quintile to the bottom, and 3 percent fell from the top quintile to the bottom.

Note that individuals with rising incomes can experience downward relative mobility if their incomes do not grow as fast as those of their peers who had been earning less than they did 10 years ago. For an individual to experience absolute downward mobility, he or she must experience declines in real income.

FIGURE 3

Relative Mobility Into the Bottom Income Quintile

Starting Quintile of Persons Who Were in the Bottom Quintile 10 Years Later



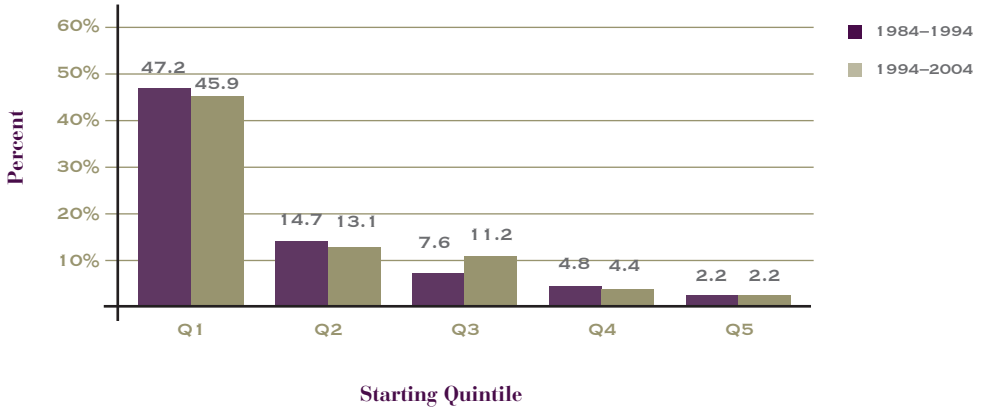
Note: Starting quintile thresholds are based on incomes at the start of the 10-year period, ending income thresholds on incomes at the end of the 10-year period.

Not surprisingly, downward absolute mobility rates are slightly lower than downward relative mobility rates, as described in Figure 4. For example, absolute downward mobility from the second quintile is about 14 percent as compared with about 20 percent for relative downward mobility. For higher income quintiles, absolute and relative downward mobility rates are more similar. Moreover, there is little change in downward absolute mobility over time.

FIGURE 4

Absolute Mobility Into the Bottom Income Quintile

Starting Quintile of Persons Who Were in the Bottom Quintile 10 Years Later



Note: Starting and ending quintile thresholds are based on incomes at the start of the 10-year period, adjusted for inflation.

Who is in the Bottom Quintile?

That economic mobility rates in the United States have remained stable over the past two decades may mask important changes in the composition of the population and the factors that contribute to upward and downward mobility. Table 1 shows that there are notable differences between individuals in the bottom quintile and the population as a whole. They are less likely to be white, and they are more likely to be women. They tend to be less educated, are less likely to own homes, and are more likely to be disabled. Although they are more likely to live in families with children, they are less likely to live with a spouse or partner. Finally, they work fewer hours, on average, during the year than does the sample as a whole. If they have a spouse or partner, that spouse or partner also works fewer hours than do spouses and partners in the whole sample.

TABLE 1 **Bottom Quintile and Sample-Wide Characteristics**
Cells in percentages, except where noted

	Bottom Quintile		Full Sample		
Characteristic	1984	1994	1984	1994	Significance
White	71.3	62.4	86.5	81.5	a, b, c, d
Male	40.6	38.6	48.6	47.1	c, d
Less than high school (HS) education	33.2	22.3	13.3	8.2	a, b, c, d
HS education	43.6	48.6	39.6	38.0	c, d
More than HS education	23.2	29.1	47.1	53.8	a, b, c, d
Homeowner	43.6	32.3	65.0	62.4	a, c, d
Disabled	16.1	19.4	8.4	10.2	b, c, d
Children present	82.2	76.3	71.3	64.3	a, b, c, d
Spouse present	59.9	47.2	77.1	70.5	a, b, c, d
Other adult present	11.0	13.8	11.1	11.0	d
25–34 years old	59.3	48.1	55.4	45.9	a, b, c
Average work hours	1,309	1,287	1,722	1,773	b, c, d
Average spouse's hours, if spouse present	1,359	1,368	1,630	1,765	b, c, d
Sample size	**790**	**637**	**2,681**	**2,288**	

a: *Proportion/mean in bottom quintile of the 1984 sample significantly different from proportion/mean in bottom quintile of the 1994 sample at the p=.10 level.*

b: *Proportion/mean in full 1984 sample significantly different from proportion/mean in full 1994 sample at the p=.10 level.*

c: *Proportion/mean in bottom quintile of the 1984 sample significantly different from proportion/mean in quintiles 2-5 of the 1984 sample at the p=.10 level.*

d: *Proportion/mean in bottom quintile of the 1994 sample significantly different from proportion/mean in quintiles 2-5 of the 1994 sample at the p=.10 level.*

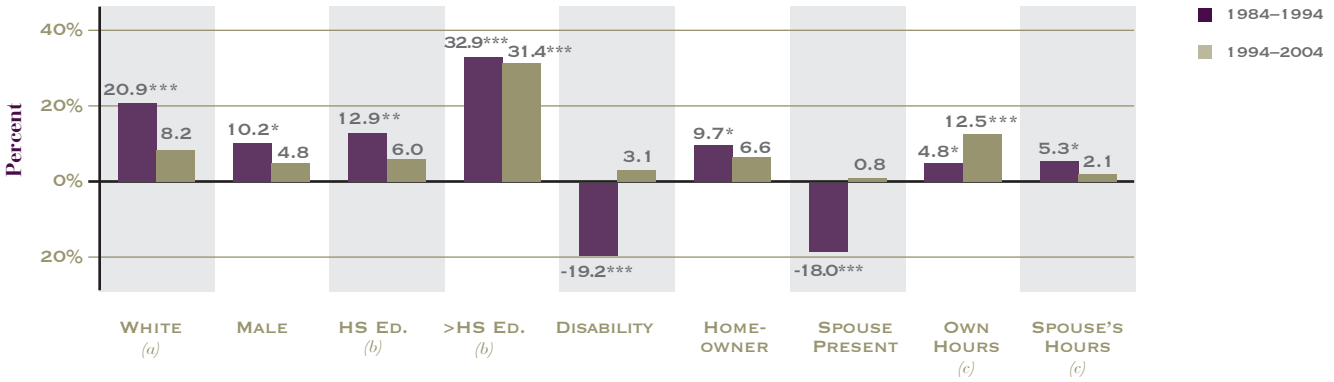
In addition, there have been important changes in the bottom quintile and the population as a whole over time. The percent of whites in the bottom quintile is falling, as is the share with children and with spouses present. The population in the bottom quintile is also becoming older and more educated.

Factors that Contribute to Economic Mobility

To better understand the factors that contribute to upward and downward mobility and to see if the relative importance of different factors has changed over time, we use a statistical technique called least-squares regression analysis.[10] The analyses consider the effects of race (white v. non-white),[11] gender, age (25–34 v. 35–44), education,[12] presence of children, disability status, homeownership, spouse or partner presence, work hours, spouse or partner work hours, presence of other adults, and, in the case of downward mobility, starting income quintile. Figures 5 and 6 highlight the factors that are, statistically, significantly related to mobility for at least one of the two time periods. These analyses focus on relative mobility rather than absolute mobility; the latter findings are similar.[13]

Education—particularly schooling beyond high school—is a primary, consistent driver of upward mobility. Race and gender as factors contributing to upward mobility have diminished in importance over time while own work effort has increased in importance. Education is extremely important. During 1984–1994

FIGURE 5 **Characteristics Associated With Leaving the Bottom Quintile**



** p < 0.10, ** p < 0.05, *** p < 0.01. Coefficients are based on a linear probability regression that includes these characteristics as well as dummy variables for age, the presence of children, and the presence of other adults in the household. We measure own and spouse's work hours in thousand-hour units. We do not differentiate between spouses and permanent cohabiters, and interact the spouse hours variable with a dummy variable for the spouse's presence. Only characteristics with significant coefficients in at least one time period are shown.*

Notes: (a) Relative to non-whites. (b) Relative to individuals who did not complete high school. (c) Effect of an additional 1,000 hours of work per year.

and 1994–2004, the probability that an individual would leave the bottom quintile was over 30 percentage points higher for those with more than a high school education than for those who did not complete high school. That said, getting a high school diploma rather than dropping out has become less important to upward mobility.

Second, the independent impact of race on upward mobility appears to have decreased over time. Between 1984 and 1994, the probability that a white person would leave the bottom quintile was 21 percentage points higher than a non-white's chances of upward mobility. By the 1994–2004 period, the strength of the relationship between upward mobility and race had substantially diminished.[14]

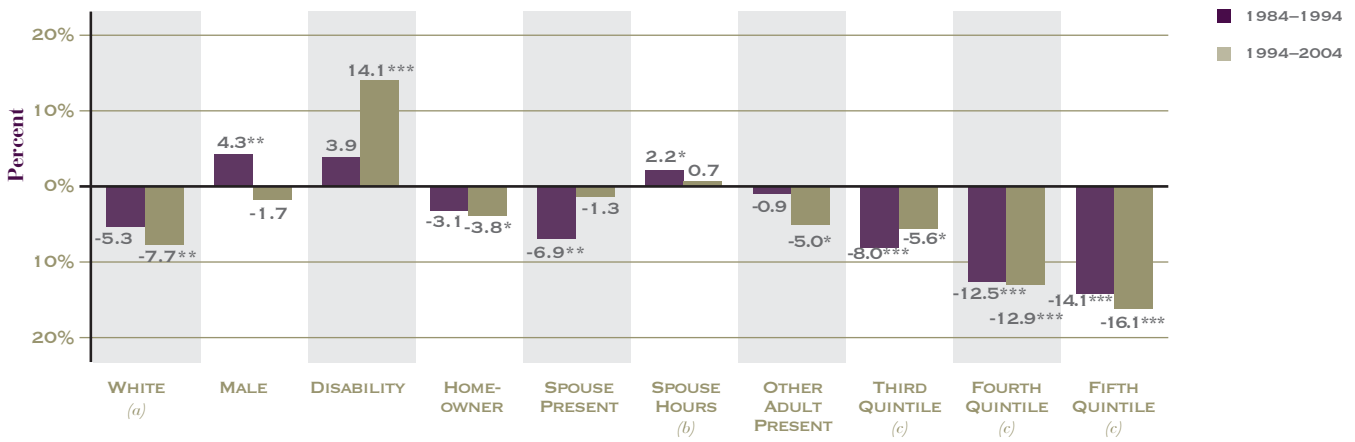
Third, those who work more hours are more likely to move up and out of the bottom quintile. Further, the relationship between work and upward mobility has grown over time. An extra 1,000 hours of work increased the probability of leaving the bottom quintile by nearly 5 percentage points between 1984 and 1994; between 1994 and 2004, an extra 1,000 hours increased the probability of upward mobility by over 12 percentage points.

Finally, the relationships between upward mobility, marital status, and spousal work are complex and have changed over time. Between 1984 and 1994, married or partnered individuals in the bottom quintile whose spouse or partner did not work were 18 percentage points less likely to be upwardly mobile than were un-partnered individuals; however, for those with a spouse or partner, an additional 1,000 hours of spouse or partner work increased upward mobility by over 5 percentage points. Between 1994 and 2004, neither the presence nor the work of spouses and partners was related to upward mobility.

Other than one's original position in the income distribution, few factors consistently predict downward mobility. Figure 6 shows that an individual's starting income quintile has a strong relationship to the probability of falling into the bottom quintile. While this relationship held over both periods, the effects of other factors that influence downward mobility have shifted over time. For example, being white did not significantly reduce the chances of downward relative mobility between 1984 and 1994, but it did between 1994 and 2004. Note, however, that the magnitude of the difference is modest: 7.5 percentage points in the later period compared with 5.3 percentage points in the early period.

Similarly, having a disability was not strongly related[15] to downward relative mobility between 1984 and 1994, but those with a disability were 14.1 percentage points more likely to fall to the bottom quintile than those without a disability between 1994 and 2004. And while men were more likely to fall to the bottom than women during the early period, there were no significant gender differences during the later period.

FIGURE 6 **Characteristics Associated With Entering the Bottom Quintile**



** p < 0.10, ** p < 0.05, *** p < 0.01. Coefficients are based on a linear probability regression that includes these characteristics as well as dummy variables for age, education, the presence of children, and own work hours. We measure own and spouse's work hours in thousand-hour units. We do not differentiate between spouses and permanent cohabiters, and interact the spouse hours variable with a dummy variable for the spouse's presence. Only characteristics with significant coefficients in at least one time period are shown.*

Notes: (a) Relative to non-whites. (b) Effect of an additional 1,000 hours of spouse's work per year. (c) Relative to being in the second quintile.

The number of hours an individual worked was unrelated to downward mobility in both periods. Having a spouse or partner and that spouse or partner's work effort influenced downward mobility between 1984 and 1994 but not between 1994 and 2004. In the earlier period, those with spouses or partners were less likely to move down to the bottom quintile than those without, but the more that spouse or partner worked, the higher the odds of downward mobility. This may seem surprising, but it is consistent with the idea that if a working spouse or partner is what is keeping a person out of the bottom quintile at the beginning of the period, then a reduction of the spouse or partner's hours of work could drop that person down to the bottom by the end—hence those with working spouses and partners are at elevated risk for downward mobility. Again, this only holds for the 1984–1994 period.

Discussion

Using data from the PSID, we find that intragenerational mobility between 1994 and 2004 among a cohort of adults ages 25 to 44 in 1994 is quite comparable to the economic mobility experienced by an earlier cohort from 1984 to 1994. In other words, we find very little difference in overall mobility over time. This finding is striking in light of the many notable changes in the economy over the past few decades such as the ongoing shift from manufacturing to service sector jobs, rising immigrant populations, and increases in female labor force participation.

When we examine the characteristics associated with both upward and downward mobility, we find that whites, men, those with more education, and those who own homes are more likely to exit the bottom income quintile than are other individuals; however, the effects of race and educational differences on upward mobility appear to have diminished over time. The factors associated with increased downward mobility are being non-white and having a disability. Over time, the importance of these characteristics in contributing to downward mobility has increased.

Some may point to the levels of mobility in the economy and suggest that they should assuage concerns about growing income inequality and the longer-term social stratification and unequal opportunity that it may imply. However, short- and long-term inequality and mobility interact in complex ways (for a discussion of how they relate to one another, see Box 1). It is important to note that in the context of rising income inequality, stable mobility rates suggest that the distribution of lifetime income must be growing more unequal. That is, lifetime or long-term economic inequality is rising.

BOX 1

The Relationships between Short-Term Inequality, Long-Term Inequality, and Economic Mobility

A. Definitions. *Short-term inequality* describes inequality in the distribution of income received over a short period of time, usually a year. *Long-term inequality* describes inequality in the distribution of income received over several years or even a lifetime. *Mobility* is the rate at which individuals change positions in the income distribution over time.

B. Long-term inequality in the context of stable short-term inequality and stable mobility. To understand the relationship between short- and long-term inequality and mobility, consider this simple example.

There are only two types of people, the "have-nots," whose jobs pay $20,000 a year, and the "haves," whose jobs pay $40,000 a year. The population is equally divided in any given year, but from year to year, 20 percent of workers change types. In any one year, the "haves" have twice as much income as the "have-nots."

But over a longer period (say, two years), 20 percent of the "haves" will have been "have-nots" for part of the time. Thus the average annual income for the "haves" is $38,000 over two years; for the "have-nots" it is $22,000. As a result, the "haves" have about 75 percent more income than the "have-nots" when inequality is measured over the longer term, illustrating that mobility reduces long-term inequality relative to inequality in a single year.

C. Long-term inequality in the context of increasing short-term inequality and stable mobility. Using the same example, consider what happens if short-term inequality increases. In year two, the "haves" now earn $50,000 a year and the "have-nots" earn $10,000. Keeping mobility constant at 20 percent for both groups, we find that average annual income for the "haves" is $43,000; for the "have-nots" it is $17,000. As a result, the "haves" have about 2.5 times the average annual income of the "have-nots." Thus, the increase in short-term inequality results in an increase in long-term inequality even with constant mobility. While mobility does reduce long-term inequality relative to inequality measured in a single year, increases in single year inequality imply increases in long-term inequality even if mobility rates remain constant. *In fact, mobility rates have to rise to offset the long-term effects of rising short-term inequality.*[16]

D. Implications of rising short-term inequality for mobility. Rising short-term inequality does not necessarily have any effect on mobility. Some might assert that if the "rungs of the ladder" are moving farther apart, mobility must be falling, but it really depends on why inequality is increasing (and in a narrower, technical sense, how inequality and mobility are measured). For example, imagine that the "haves" in our example have high technology jobs and the "have-nots" have manual labor jobs, but the sorting across jobs is random. If technological change causes tech jobs to be even higher paying and manual jobs to be even lower paying, income inequality will increase; but the chance that a laborer will land a tech job and that a tech worker will fall into a manual labor job remains constant. Of course, if the "have-nots" lack the skills necessary to shift into the now more demanding tech jobs held by the "haves," then mobility rates could drop along with rising inequality. The important point is that rising inequality does not necessarily imply a change in mobility.

Endnotes

[1] U.S. Census Bureau, 2007.

[2] For example, the ratio of income at the top of the income distribution (95th percentile) to income near the bottom (20th percentile) has grown from 7.21 in 1984 to 8.50 in 2004 and to 8.69 by 2006. Similarly the Gini coefficient measuring overall inequality rose from 0.418 to 0.466 between 1984 and 2004 and reached 0.470 by 2006 (U.S. Census Bureau 2007).

[3] Fletcher, 2008.

[4] Taylor et al., 2008.

[5] For analyses of intergenerational mobility, see Isaacs et al. (2008) and Mazumder (2008).

[6] The implications of different measurement choices for assessments of the level of and trend in mobility are discussed in detail in Acs and Zimmerman (2008).

[7] Incomes are adjusted for family size (see Acs and Zimmerman, 2008). Mobility rates may be influenced by the relative strength of the economy. The years we use to anchor our analyses are drawn from similar points in the business cycle: 1984, 1994, and 2004 were all early recovery years in which the economy was recovering from a recession but had not yet reached a business cycle peak. The economy was stronger and the share of the population working was higher in 1994 and 2004 than in 1984. The employment to population ratios in 1984, 1994, and 2004 were 59.5 percent, 62.5 percent, and 62.3 percent, respectively (http://www.bls.gov/web/cpseea1.pdf, last accessed 3/14/08). On net, however, these differences are not likely to have large effects on our findings because not all non-workers are in the bottom income quintile, starting work does not guarantee moving across quintile lines, and the change in the share of the population that is working is relatively small given the size of the total population.

[8] We restrict our analyses to individuals who are household heads or partners in both the base and end year, and we exclude individuals with family incomes under $1,200 in 2005 dollars or in the top 1 percent in either the base or end year. For details about the PSID and sample construction, see Acs and Zimmerman (2008).

[9] That mobility has remained fairly constant from decade to decade is consistent with findings made by other researchers. For a comparison of research findings on mobility, see Acs and Zimmerman (2008).

[10] For a full description of the regression model, see Acs and Zimmerman (2008).

[11] Because there are few Hispanics in the original PSID sample, we can only reliably distinguish between whites and non-whites.

[12] We use three education categories: less than high school, high school degree, and schooling beyond high school. We do not distinguish between those who have attended some college, those who have a college degree, and those who have graduate/advanced degrees. This allows for a more parsimonious specification of the model and a focus on the value of a high school degree.

[13] For a regression analysis of absolute mobility, see Acs and Zimmerman (2008).

[14] The statistical significance diminished as well. Because Latinos added to the PSID in 1990 and the 1997 immigrant subsample is excluded from the analysis, the reference category is largely composed of blacks. Note that the bottom income quintile has become less "white" over time. As such, the declining significance of race/ethnicity for upward mobility may in part reflect unobserved differences in the characteristics of whites and non-whites who are in the bottom quintile of the income distribution.

[15] Technically speaking, the difference was not statistically significant.

[16] For a more detailed discussion of this issue, see Gottschalk and Danziger (1998).

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ABOUT THE PROJECT

The Economic Mobility Project is a unique nonpartisan collaborative effort of The Pew Charitable Trusts that seeks to focus attention and debate on the question of economic mobility and the health of the American Dream. It is led by Pew staff and a Principals Group of individuals from four leading policy institutes—The American Enterprise Institute, The Brookings Institution, The Heritage Foundation and The Urban Institute. As individuals, each principal may or may not agree with potential policy solutions or prescriptions for action but all believe that economic mobility plays a central role in defining the American experience and that more attention must be paid to understanding the status of U.S. economic mobility today.

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